



USDA Collection Strategy for ResourceSat

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1. Background of USDA Satellite Imagery Archive
2. Who is doing the Purchasing? How and Why?
 - What is the Collection Strategy?
3. How is data distributed?
 - How much?
 - What is it used for?



Background on the USDA-Satellite Imagery Archive (USDA-SIA)

USDA-SIA is a program within the Foreign Agricultural Service that:

- Provides access to satellite imagery purchased by USDA for participating agencies.
- Cost-sharing program to maximize the cost effectiveness of Department expenditures on satellite imagery.
- Reduces the per-image price paid by USDA agencies.
- Takes advantage of contracts already in place.
- Benefits from leveraging the power of a single USDA purchasing body.

USDA purchases satellite imagery using the investment of the Commodity Credit Corporation and special imagery requests by the agencies.





USDA-SIA Roles

- **Purchase satellite imagery from commercial vendors**
 - USDA-SIA purchases satellite imagery from vendors who are on the prime vendor contract.
 - USDA standing order for US
 - USDA standing orders for foreign areas
- **Process and store the satellite imagery**
 - USDA-SIA processes the satellite imagery for the Foreign Agricultural Service, International Production Assessment Division.
 - No processing for the “archive” product.
- **Distribute the satellite imagery to USDA agencies**
 - USDA-SIA distributes the satellite imagery to the agencies who participate in the USDA archive.

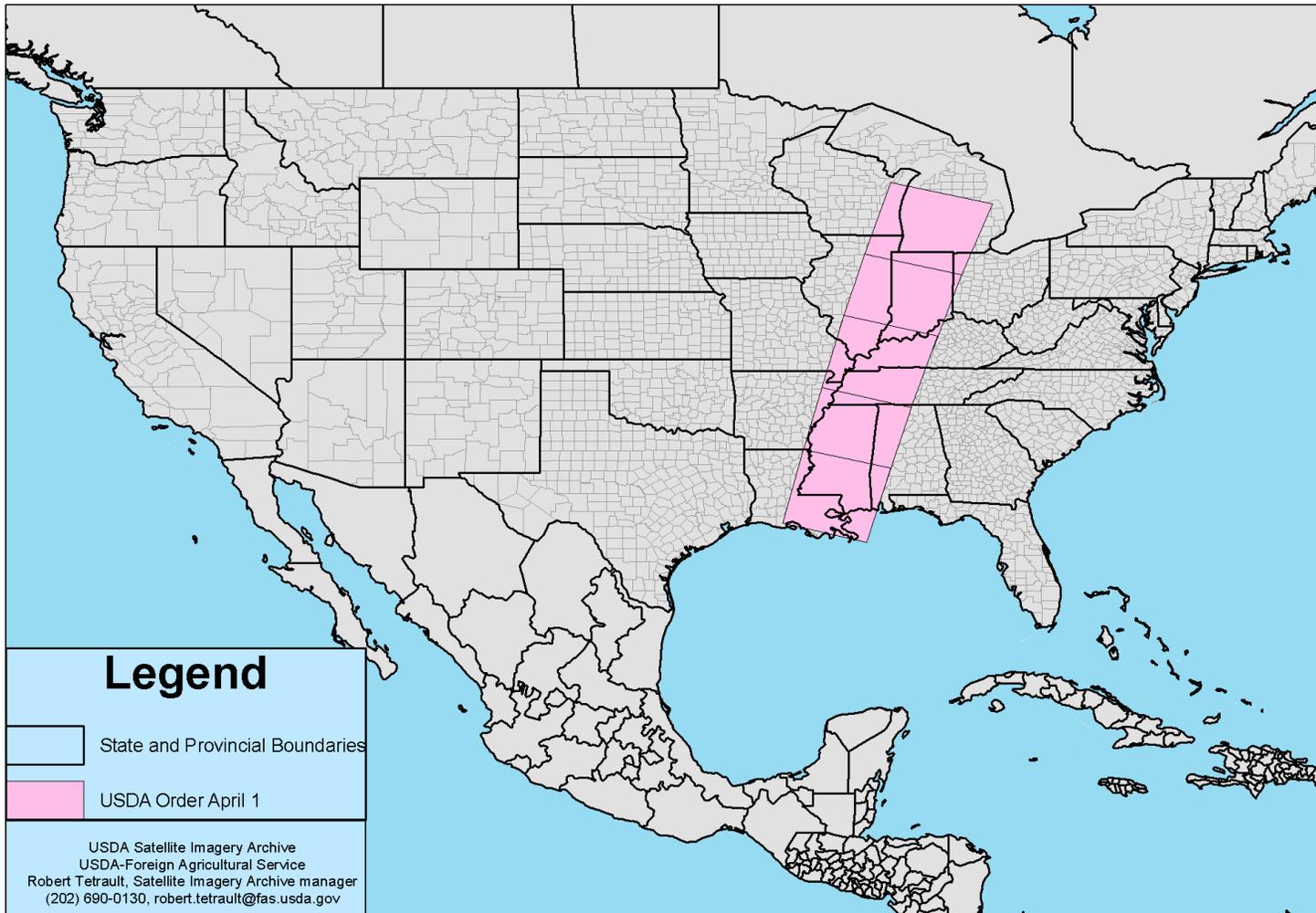
USDA Standing Order Coverage for the United States (lower 48)

- The USDA is the largest commercial purchaser of ResourceSat-1 AWiFS data.
 - Largest in 2006, 2007 and probably 2008
- USDA purchases (and induces coverage) from April 1 to September 30
 - Commodity Credit Corporation funding
- Continued coverage, albeit less dense, from October 1 to March 31.
 - Pasture, rangeland and forage areas
 - Program Integrity funding, Risk Management Agency



**ResourceSat
satellite is continuously
collecting data
for United States.**

USDA Order for P6-AWiFS CONUS: April 1, 2008

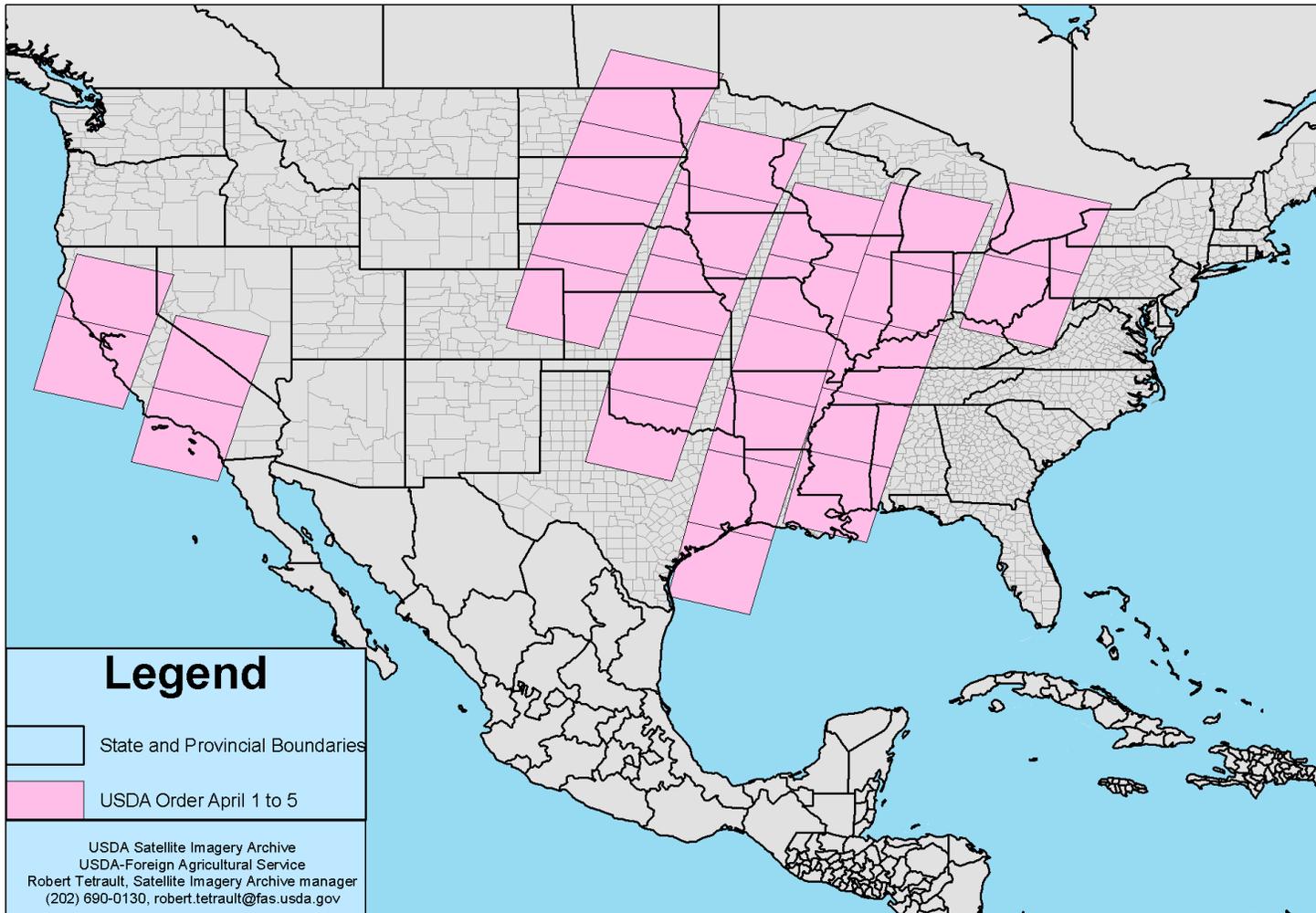




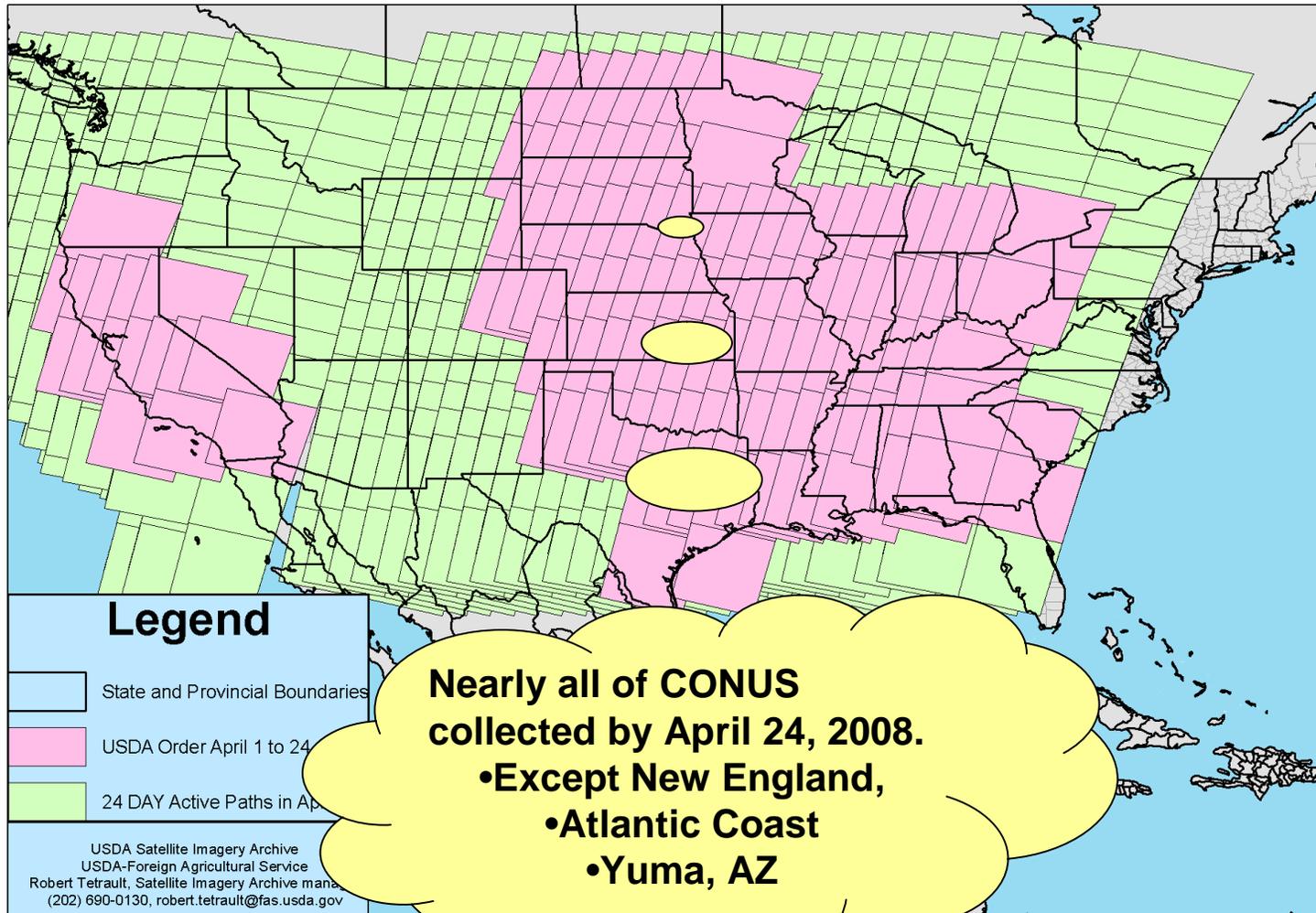
USDA Satellite Imagery Archive

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USDA Order for P6-AWiFS CONUS: April 1 to 5, 2008



Active Paths for P6-AWiFS CONUS: April 1 to 24, 2008

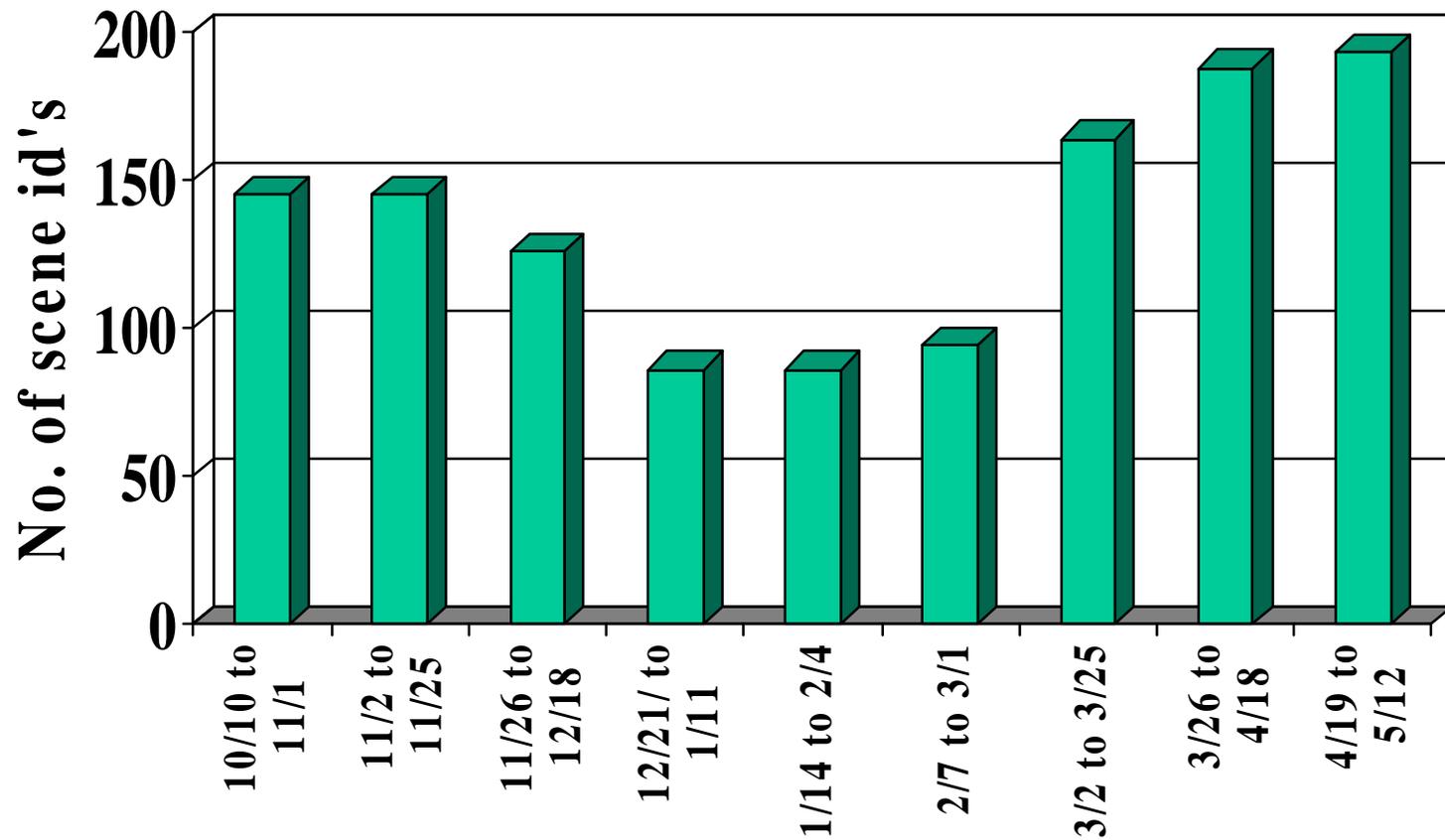




ResourceSat AWiFS Collects for October, 2008 through March, 2009

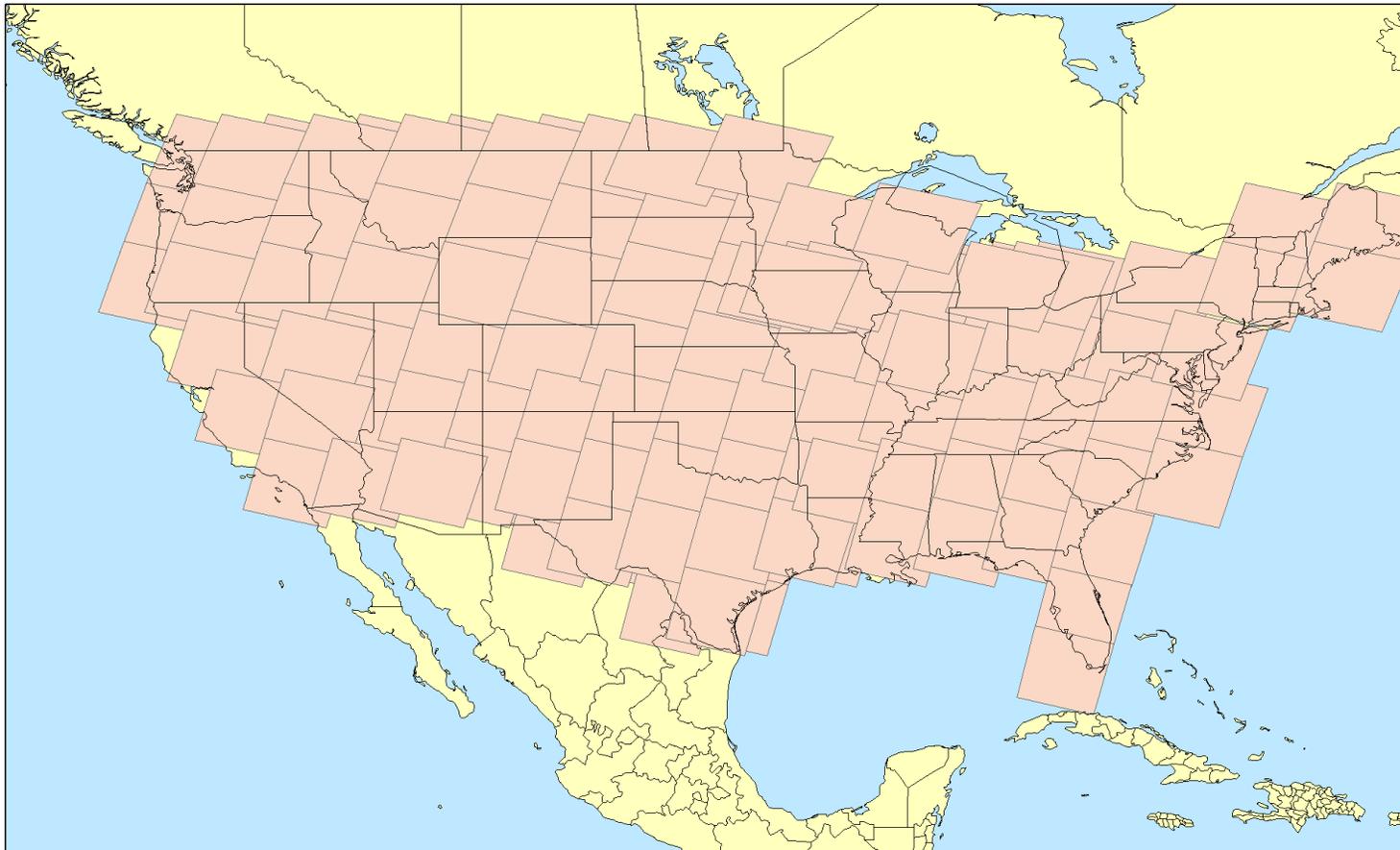
- Approximately 12-day repeat coverage for areas from Oct. 1 to Dec. 15, 2008
- Approximately 24-day repeat coverage for areas from Dec. 15 to March 1, 2009
- Approximately 12-day repeat coverage for areas from March 1 to April 15, 2009
- Approximately 6-day repeat coverage for areas starting April 15, 2009
 - Mountain West areas continue 12-day repeat coverage

Planned Collects for US for “leaf-off”

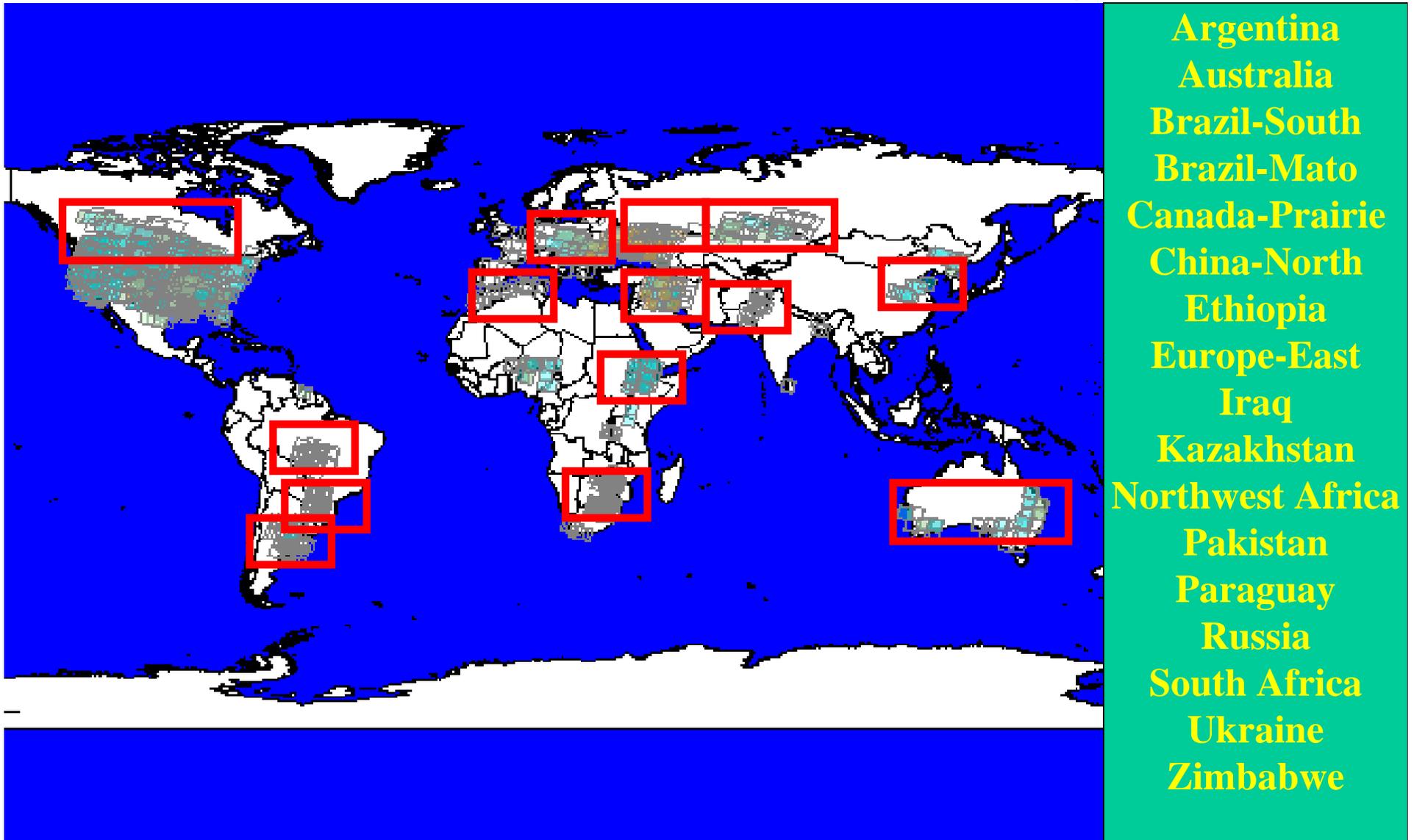




**Pasture, Rangeland, and Forage for Crop Insurance Expansion
Collects for Date 3: Nov. 3 to Nov. 25, 2008**



ResourceSat AWiFS IRS P-6 Purchased by USDA





Who pays for the satellite imagery?

- Participating agencies pay an annual fee for access to the USDA Satellite Imagery Archive.
 - Fees do not cover the purchase of new imagery.
- USDA purchases satellite imagery using the investment of the Commodity Credit Corporation.
 - This is the USDA's standing order
- If agencies need additional imagery not in the standing order, the purchase needs to be funded separately.
 - RMA is funding the pasture, rangeland and forage collects
- The benefits to participating are high, if the area and time frame coincide with the USDA's standing order.

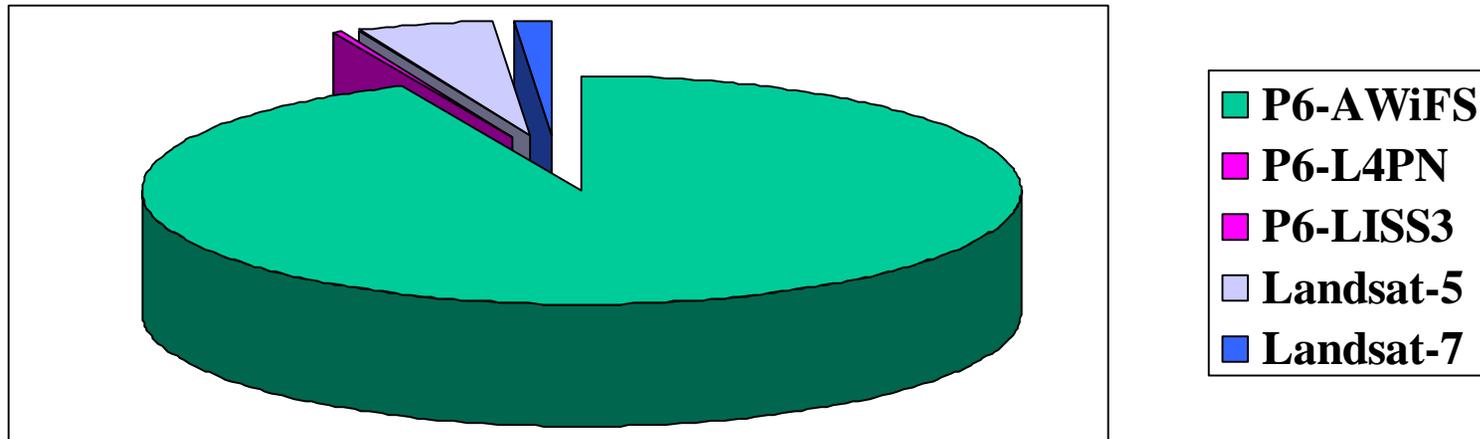


Distribution

- USDA-SIA distributed 5,534 field-level satellite scenes to USDA agencies, up 39 percent from FY2007.
- The value of the distributed satellite scenes at catalogue prices (non-USDA contract)
 - \$5.9 million in FY2008
 - up from \$4.1 million in FY2007
- USDA's cost avoidance (after expenses) is
 - \$3.5 million in FY2008
 - Up from \$1.6 million in FY2007
- Does not include the value of the application.

USDA-SIA Distributed 5,534 Field-level Satellite Scenes in FY2008 to USDA agencies

Distribution by Satellite Data Type



1. 24 % distributed through FAS-NAS network.
2. 31 % through hard drive (to NASS and RMA).
3. 45 % through Archive Explorer

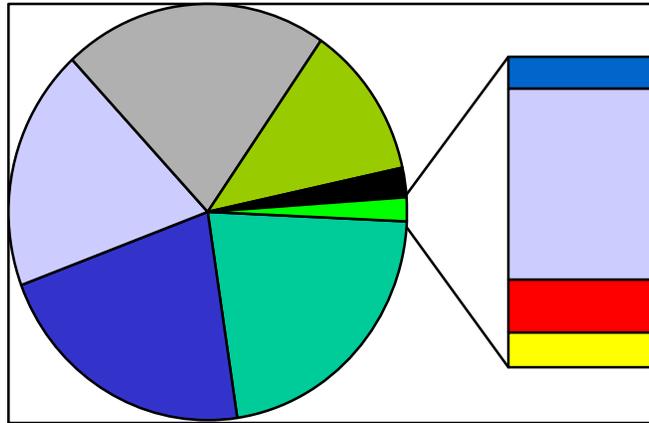
Archive Explorer can be found at: <http://www.pecad.fas.usda.gov/remote.cfm>



How to Access the ResourceSat-1 Data

- For participating agencies in the USDA-SIA, please use **Archive Explorer**.
 - Data is free. No per-scene transactional cost. Arrives on CD via common carrier.
- USDA-SIA operates on an “all you can eat” policy.
- Data is licensed to USDA and license restrictions apply.
 - Data cannot be redistributed. Data cannot be used commercially
 - Derived products such as the Cropland Data Layer have no license restrictions.
 - License can be “uplifted.”

Applications of Field-level* Satellite Data in FY 2008



Applications and Agency

- Compliance/Regulatory Use (RMA)
- Early warning of potential food supply disruptions (FSA and FAS)
- Research (ARS and other agencies)
- Cropland data layer (NASS)
- Planted area of US corn and soybean (NASS)
- Foreign crop condition assessment (FAS)
- Land Cover (USGS and other agencies)
- Area Frame (NASS)
- Fire and Forest Pest (USFS)
- Soil Modeling (NRCS)

* Field-level satellite imagery allows users to distinguish fields or forest land parcels. It is typically defined by GSD of 5 to 100 meters.



USDA Satellite Imagery Archive

Summary

- **USDA uses ResourceSat AWiFS imagery for operational agricultural programs**
 - Third year of operational use
- **ResourceSat data is**
 - orthorectified, can be radiometrically corrected
 - Satellite is “always on” for the U.S.
- **Agricultural applications are:**
 - Compliance/Regulatory Use (RMA)
 - Early warning of potential food supply disruptions (FSA and FAS)
 - Research (ARS and other agencies)
 - Planted area of US corn and soybean & Cropland data layer (NASS)
 - Foreign crop condition assessment (FAS)
- **USDA-SIA is a data-sharing partnership**
 - Saved \$3.5 million in cost avoidance for USDA



USDA Satellite Imagery Archive

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Thanks to...

ASRC-Management Services and Global Marketing Insights

And to the analysts and scientists using the data at USDA who provide feedback.

Questions?

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